

Federal Communications Commission
445 12th street, S.W.
Washington, DC 20554

RE: CC Docket No. 02-6, comments on E-rate eligible services list, FCC 04-200

August 23, 2004

To Whom It May Concern:

In regards to the E-rate eligibility list, we are requesting that the FCC include Dark Fiber services as an eligible item.

Three major advantages of Dark Fiber services over traditional carrier services

1. Dark Fiber services has the flexibility of meeting the school district's current needs while providing a hassle free environment for future capacity upgrades. Almost all school district local area networks (LAN) utilize Ethernet technology, which has the ability to 'light' Dark Fiber services. It has been common to upgrade Dark Fiber bandwidth from 10 to 100 and 1,000-megabit (AKA gigabit). In the near future, 10-gigabit capacity will be affordable as well. The commercially available Ethernet components can extend the network to over 100 kilometers. These options make Dark Fiber services desirable. All that is needed for the school district to upgrade the network bandwidth is minor equipment changes at their site. There is no complex carrier equipment in the network and there is no need for costly, cumbersome carrier upgrades to increase the network capacity. With Dark Fiber services, upgrades can happen quickly and cheaply, and the school district can change technology as needed thereby giving the school district a future proof solution.
2. The per unit cost of bandwidth is far better with Dark Fiber services than traditional carrier services. This is because of the reduced amount of network components, because the school district is paying for what it needs as opposed to paying for what the carrier needs, and because the service price is not related to the bandwidth provided. Additionally, the school district does not need to buy expensive equipment to convert the school district's simple, cheap, abundant Ethernet connections to expensive cumbersome carrier based technologies. We recently encountered this situation when we bid a high capacity system for a school district with three locations. A traditional tariff ATM DS3 (45 megabit) solution for the three sites would have cost approximately a total of \$10,300 per month. The tariff solution would also require the purchase of approximately \$30,000 of routing equipment to convert the district's Ethernet to the carrier's ATM service. We could not bid Dark Fiber services as it is not E-rate eligible so we bid a gigabit Ethernet service (1,000 megabit). This service would require approximately \$700 of modules to place into the school district's existing equipment, however the carriers would need to provide additional equipment in their network to provide the lit service. Bids were received from Adelphia, FiberTech and Verizon. Adelphia and FiberTech were competitively priced at \$3,700 and \$4,700 per month respectively. Verizon

bid \$14,000 per month and because their solution required tying into their SONET network, it capped the bandwidth at 600 megabit. Had dark fiber been eligible, we would have saved money from the service bids as the carriers would not have to purchase central office equipment, and we would have open upgrade path to 10 gigabit Ethernet as needed in the future.

3. Not only is there a high cost of service with traditional lit carrier services, but also there are additional technical and administrative costs to the school district. With Dark Fiber services, there is no need for the school district to acquire unique skill sets to implement and diagnose equipment issues. Troubleshooting is much easier with Dark Fiber services as it removes the complex cumbersome carrier equipment from the network. Dark Fiber services eliminate the need for the district to interface with uncooperative carrier call centers that are less than knowledgeable in data networking technologies, and coordinating repair issues with them. Additionally, the removal of carrier equipment eliminates points of network failure, thereby creating a more reliable network.

Four benefits to the program

1. Dark Fiber services will simplify the school district's E-rate process. With Dark Fiber services ineligible for E-rate funding, schools are forced to contort simple solutions to meet the eligible service guidelines. Then, more complexity is induced as the school district grapples with service changes to meet revised eligibility guidelines. Along with the technical concerns, there is the administrative burden of staying E-rate compliant. Currently a number of districts have made commitments to Dark Fiber services and are dealing with converting to a lit service in order to maintain E-rate eligibility.
2. Dark Fiber service reduces the cost of compatibility issues by allowing customer to standardize on particular technologies. Currently, many school districts have more expertise on Ethernet LAN/WAN and IP routing equipment than carriers. Dark Fiber services ease the technical resources necessary to maintaining network connections.
3. Dark Fiber service eliminates the district's need to request funding for expensive, complicated equipment (i.e. ATM routers with Ethernet modules) to connect their LAN's to traditional carrier networks. Ethernet modules for Dark Fiber services are commodities now because of what is happening in the marketplace. It makes no sense to incur the cost and burden of converting the school district's simple, cheap, ubiquitous Ethernet technology to complex traditional carrier offerings, especially when Dark Fiber services eliminates the need for any carrier equipment.
4. Dark Fiber services will promote competition between startup companies like FiberTech, Multiple Service Operators (MSO) like the cable companies, forward thinking aggressive independent carriers, and the established carriers. While in some cases it may be desirable to have a lit service from a carrier, allowing a choice of Dark Fiber services or having a dark fiber vendor that can provide a lit service is invaluable for bid competition.

Defining Dark Fiber as an E-rate eligible service

Dark Fiber services can fit into existing definitions and procedures. It should be part of telecommunications section, receiving priority 1 status, as it's own category similar to the digital transmission category.

There should be guidelines for one-time installation costs. The one-time installation fees should not exceed a certain percentage of the overall project cost over a certain time. For example this could be 25% of a total 5-year contract. The installation percentage should not be allowed over too long a period, nor should it include renewal options that may inflate the overall project cost. For example a service that costs \$100,000 per year would have total cost of \$500,000 over 5 years. Therefore the maximum eligible installation should be \$125,000. But if three 5-year renewals were included in the contract, the total project cost could, depending on exercising the options, be considered at \$2,000,000, which would make the maximum installation be \$500,000. The renewal options cause an inflated contract value and should not be allowed to factor into the total project cost thereby limiting the maximum allowable one-time installation fee to max out at \$125,000 in this example.

Currently it is very hard to predict if and when SLD approval of projects will occur. There is significant risk to the district to accept alternative telecommunication services before funding letters are sent, even if the service should be eligible. Delayed funding is a huge deterrent to accepting these services. Once a multiyear telecommunication service is initially approved, there should be a streamlined process for applying for the same service in subsequent years. The program should consider 'pre-allocating' subsequent year funds for such multiyear telecommunication contracts. The 471 could be modified to include a 'prior approval code' to FRN requests to streamline the process. Such FRN's should be required to match prior year applications to ensure it is a continuation of the same contract. Any modifications should be required to have their own FRN request and review.

Conclusion

Dark Fiber service eligibility is desirable because it is flexible, is easy to utilize, has a better cost-benefit than lit services, and ultimately provides competition in the carrier space. Dark Fiber services give the school district a choice to bypass the monopolistic carriers, and their practice of pricing network services by bandwidth. A streamlined application processes would encourage school districts to take advantage of the benefits of Dark Fiber services.

Respectfully submitted,

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